

CLAIMS

What is claimed is:

1. A method for managing an uncorrectable data error (UE) as the UE passes through a plurality of devices in a central electronic complex (CEC), the method comprises the steps of:
 2. (a) detecting a UE-RE by at least one device in the CEC;
 3. (b) providing an attention signal by at least one device to a diagnostic system to indicate the UE-RE condition; and
 4. (c) analyzing the UE-RE attention signal by the diagnostic system to produce an error log with a list of failing parts and a record of the log.
5. 2. The method of claim 1 wherein the UE can produce any of the following conditions: a UE-RE condition; an SUE-mask condition; SUE interrupt condition; and a SUE-CS condition.
6. 3. The method of claim 2 wherein the SUE-mask condition does not need to be reported.
7. 4. The method of claim 1 wherein the diagnostic system comprises a processor runtime diagnostic (PRD) code.
8. 5. The method of claim 2 wherein the detecting step (a) comprises the steps of:
 1. (a1) detecting a UE-RE condition by a first device; and

(a2) detecting a special uncorrectable data error (SUE) condition by at least one other device at a later point in time, wherein the detection of the UE-RE condition by the first device produces a UE-RE condition and the detection of the SUE condition by the at least one other device produces a SUE-CS condition, wherein the UE-RE condition and the SUE-CS condition are processed at substantially the same time.

6. The method of claim 4 wherein the PRD code is within a service processor.

7. The method of claim 6 wherein the PRD code accesses each of the plurality of devices through an interface within the service processor.

8. The method of claim 7 wherein the interface comprises a JTAG interface.

9. A computer readable medium containing program instructions for managing an uncorrectable data error (UE) as the UE passes through a plurality of devices in a central electronic complex (CEC), the program instructions for:

(a) detecting a UE-RE by at least one device in the CEC;

(b) providing an attention signal by at least one device to a diagnostic
cate the UE-RE condition; and

(c) analyzing the UE-RE attention signal by the diagnostic system to produce an error log with a list of failing parts and a record of the log.

10. The computer readable medium of claim 9 wherein the UE can produce any of the following conditions: a UE-RE condition; an SUE-mask condition; SUE interrupt

3 condition; and a SUE-CS condition.

1 11. The computer readable medium of claim 10 wherein the SUE-mask condition
2 does not need to be reported.

1 12. The computer readable medium of claim 9 wherein the diagnostic system
2 comprises a processor runtime diagnostic (PRD) code.

1 13. The computer readable medium of claim 10 wherein the detecting step (a)
2 comprises the steps of:
3 (a1) detecting a UE-RE condition by a first device; and
4 (a2) detecting a special uncorrectable data error condition (SUE) condition by
5 least one other device at a later point in time, wherein the detection of the UE-RE condition by
6 the first device produces a UE-RE condition and the detection of the SUE by the at least one
7 other device produces a SUE-CS condition, wherein the UE-RE condition and the SUE-CS
8 condition are processed at substantially the same time.

1 14. The computer readable medium of claim 12 where in the PRD code is within a
2 service processor.

1 15. The computer readable medium of claim 14 wherein the PRD code accesses
2 each of the plurality of devices through an interface within the service processor.

1 16. The computer readable medium of claim 15 wherein the interface comprises a

2 JTAG interface.

1 17. A service processor for managing an uncorrectable data error (UE) as the UE
2 passes through a plurality of devices in a central electronic complex (CEC), the service
3 processor comprises:

4 an attention handler for detecting a UE-RE by at least one device in the CEC and
5 providing an attention signal by at least one device to indicate the UE-RE condition; and

6 a diagnostic system for receiving the attention signal and for analyzing the UE-RE
7 attention signal to produce an error log with a list of failing parts and a record of the log.

1 18. The service processor of claim 17 wherein the UE can produce any of the
2 following conditions: a UE-RE condition; an SUE-mask condition; SUE interrupt condition,
3 and a SUE-CS condition.

1 19. The service processor of claim 18 wherein the SUE-mask condition does not
2 need to be reported.

1 20. The service processor of claim 17 wherein the diagnostic system comprises a
2 processor runtime diagnostic (PRD) code.

1 21. The service processor of claim 18 wherein the attention handler detects a UE-
2 RE condition by a first device, and detects a special uncorrectable data error checkstop (SUE-
3 CS) condition by at least one other device at a later point in time, wherein the UE-RE condition
4 and the SUE-CS conditions are processed at substantially the same time.

1 22. The service processor of claim 20 wherein the PRD code accesses each of the
2 plurality of devices through an interface within the service processor.

1 23. The service processor of claim 22 wherein the interface comprises a JTAG
2 interface.

1 24. A method for managing an uncorrectable data error (UE) as the UE passes
2 through a plurality of devices in a central electronic complex (CEC), the method comprises the
3 steps of:

4 (a) detecting a UE-RE condition by at least one device in the CEC wherein the
5 detecting step (a) comprises the steps of: (a1) detecting a UE-RE condition by a first device;
6 and (a2) detecting a special uncorrectable data error (SUE) condition by the at least one other
7 device at a later point in time, wherein the detection of the UE-RE condition by the first device
8 produces a UE-RE condition and the detection of the SUE condition by the at least one other
9 device produces a SUE-CS condition, wherein the UE-RE condition and the SUE-CS
10 conditions are processed at substantially the same time;

11 (b) providing an attention signal by at least one device to a processor runtime
12 diagnostic (PRD) code to indicate the UE-RE condition, wherein the PRD accesses each of the
13 plurality of devices through an interface within the service processor; and

14 (c) analyzing the UE-RE attention signal by the diagnostic system to produce an
15 error log with a list of failing parts and a record of the log.

1 25. The method of claim 24 wherein the UE can produce any of the following
2 conditions: a UE-RE condition; an SUE-mask condition; SUE interrupt condition; and a SUE-
3 CS condition.

1 26. The method of claim 25 wherein the SUE-mask condition does not need to be
2 reported.

1 27. The method of claim 26 wherein the PRD code is within a service processor.

1 28. The method of claim 27 wherein the interface comprises a JTAG interface.

1 29. A computer readable medium containing program instructions for managing an
2 uncorrectable data error (UE) as the UE passes through a plurality of devices in a central
3 electronic complex (CEC), the program instructions for:

4 (a) detecting a UE-RE condition by at least one device in the CEC wherein the
5 detecting step (a) comprises the steps of: (a1) detecting a UE-RE condition by a first device;
6 and (a2) detecting a special uncorrectable data error (SUE) condition by the at least one other
7 device at a later point in time, wherein the detection of the UE-RE condition by the first device
8 produces a UE-RE condition and the detection of the SUE condition by the at least one other
9 device produces a SUE-CS condition, wherein the UE-RE condition and the SUE-CS
10 conditions are processed at substantially the same time;

11 (b) providing an attention signal by at least one device to a processor runtime
12 diagnostic (PRD) code to indicate the UE-RE condition, wherein the PRD accesses each of the
13 plurality of devices through an interface within the service processor; and

14 (c) analyzing the UE-RE attention signal by the diagnostic system to produce an
15 error log with a list of failing parts and a record of the log.

1 30. The computer readable medium of claim 29 wherein the UE can produce any of
2 the following conditions: a UE-RE condition; an SUE-mask condition; SUE interrupt
3 condition; and a SUE-CS condition.

1 31. The computer readable medium of claim 30 wherein the SUE-mask condition
2 does not need to be reported.

32. The computer readable medium of claim 31 wherein the PRD code is within a
service processor.

33. The computer readable medium of claim 32 wherein the interface comprises a
JTAG interface.

34. A service processor for managing an uncorrectable data error (UE) as the UE
passes through a plurality of devices in a central electronic complex (CEC), the service
processor comprises:

4 an attention handler for detecting a UE-RE by at least one device in the CEC and
5 providing an attention signal by at least one device to indicate the UE-RE condition, wherein
6 the attention handler detects a UE-RE condition by a first device, and detects a special
7 uncorrectable data error checkstop (SUE-CS) condition by at least one other device at a later
8 point in time, wherein the UE-RE condition and the SUE-CS conditions are processed at
9 substantially the same time; and

10 a processor runtime diagnostic (PRD) code for receiving the attention signal and for

11 analyzing the UE-RE attention signal to produce an error log with a list of failing parts and a
12 record of the log, wherein the PRD accesses each of the plurality of devices through an
13 interface within the service processor.

1 35. The service processor of claim 34 wherein the UE can produce any of the
2 following conditions: a UE-RE condition; an SUE-mask condition; SUE interrupt condition,
3 and a SUE-CS condition.

1 36. The service processor of claim 35 wherein the SUE-mask condition does not
2 need to be reported.

1 37. The service processor of claim 36 wherein the interface comprises a JTAG
2 interface.